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Application No. 10/083,967

REMARKS

Claims 1-8, 10-17, 21, 22 and 78-110 are pending. The specification has been amended to update a reference to a copending application that has since issued. By this Amendment, claims 1-4, 16, 21, 22, 78, 79-82, 92-94 and 108-110 are amended to more particularly point out Applicants' claimed invention. Claims 18-20 are canceled without prejudice. Claim 4 has been rewritten in independent form. Applicants do not intend to narrow claim 4 by the amendments. Claim 16 has been rewritten to depend from claim 1. Claims 78 and 79 have been amended for clarity analogously to the clarification of claim 1. Claims 21, 22, 108-110 have been amended to depend from claim 4.

The specification supports the amendment of claim 1, for example, at page 38, line 29 to page 39, line 3 and at page 52, lines 1-17. The specification supports the amendment of claims 2, 3, and 80-82, for example, at page 38, line 29 to page 39, line 3. No new matter is introduced by the amendments.

Claims 1-8, 10-22 and 78-110 stand rejected. Claims 4, 79, 87, 88, 92-103, 107 and 110 have been found free of the cited art. Applicants respectfully request reconsideration of the rejections based on the following comments.

Rejections Under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 1-8, 10-22, and 78-110 under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner pointed to five specific issues. These are addressed in the order presented by the Examiner.

A. The Examiner noted indefiniteness in claims 1, 16, 78 and 79 with respect to the scope of the claim with respect to the interface, the first material and the second material. Applicants thank the Examiner for noting this issue. These claims have been amended to clarify their scope. In view of the amendments, Applicants assert that these claims are clear.

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B. The Examiner asserted the reference to index-of-refraction in the claim is indefinite without the specification of temperature and wavelength. With respect to temperature, a person of ordinary skill in the art would clearly understand that the temperature was room temperature unless otherwise specified. This convention does not need to be placed specifically in the claim. With respect to wavelength, Applicants have amended the claims to specify that the index-of-refraction differences would span the infrared, visible or ultraviolet range of wavelengths.

C. The Examiner asserted that the meaning of modified in claim 8 was unclear. With all due respect, in the context of the specification, it is noted that modified is intended to indicate the presence of a functional group. See, for example, page 8, lines 14-26 and page 18, line 18 to page 19, line 26. Thus, Applicants respectfully maintain that the claim is clear.

D. and E. The Examiner indicated that "blend" and "mixture" are synonymous. With all due respect, Applicants have formulated terminology in which a "blend" can be either a "mixture" or a "composite." A "composite" involves chemical bonding between the inorganic particles and the polymer while a "mixture" does not involve chemical bonding between the inorganic particles and the polymer. Thus, a blend is broader than either subspecies of mixtures or composites. While this terminology may not be standard in the art or necessarily consistent with all other of Applicants' filings, this terminology is presented in the present specification in a systematic way. Thus, Applicants maintain that this terminology is clear from the specification and that mixture and blend do not have identical scope.

In view of the comments above, Applicants believe that the present claims are clear. Applicants respectfully request withdrawal of the rejection of claims 1-8, 10-22, and 78-110 under 35 U.S.C. § 112, second paragraph as being indefinite.

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Rejection Under 35 U.S.C. § 112, First Paragraph

The Examiner rejected claims 8, 91 and 103 under 35 U.S.C. § 112, first paragraph for lack of enablement. Specifically, the Examiner asserted that the specification did not provide enablement for all modifications encompassed by "modified" polyolefins. Applicants appreciate the chance to clarify this point. First, Applicants note that there only has to be reasonable correction between the claim scope and the enabled embodiment. See MPEP 2164.08. Similarly, what is well known "is best omitted" from explicit disclosure in the specification. Again, please see MPEP 2164.08.

With respect to polyolefins with functional groups, we have attached a Chapter 9 of a text on polymers describing reactions with vinyl polymers, which is another name roughly synonymous with polyolefins. These reactions are all based on forming polyolefins with functional groups. Thus, Applicants respectfully assert that modified polyolefins were well known in the art, and as such were best omitted under the law.

Based on the evidence of record, the claims are clearly enabled. Applicants respectfully request withdrawal of the rejection of claims 8, 91 and 103 under 35 U.S.C. § 112, first paragraph for lack of enablement.

Rejection Under 35 U.S.C. § 102(b)

The Examiner rejected claims 1-3 and 5-8 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,850,498 to Shacklette et al. (the Shacklette patent). To advance prosecution of the application, Applicants have amended claim 1. Claims 2, 3 and 5-8 depend from claim 1. The Shacklette patent does not teach an optical material formed from a polymer-inorganic particle blend with a spatially varying index-of-refraction. Therefore, the Shacklette patent

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clearly does not render claim 1 *prima facie* anticipated. Applicants respectfully request withdrawal of the rejection of claims 1-3 and 5-8 under 35 U.S.C. §102(b) as being anticipated by the Shacklette patent.

Rejection Under 35 U.S.C. § 103(a) Over Shacklette et al.

The Examiner rejected claims 1-3, 5-8, 10-22, 78, 80-86, 89-91, 104-106 and 108-109 under 35 U.S.C. § 103(a) as being unpatentable over the Shacklette patent. To advance prosecution of the application, Applicants have amended claims 1 and 16. Claim 16 has been made dependent on claim 1. With respect to claim 78, Applicants believe that there has been a misunderstanding, as discussed further below. In view of the amendments and the analysis below, Applicants believe that the Shacklette patent does not render any claims *prima facie* obvious. Applicants respectfully request reconsideration of the rejections based on the following comments.

With respect to claim 1, the Shacklette patent does not teach or suggest a polymer-inorganic particle blend in an optical material forming a spatially varying index of refraction. Therefore, the Shacklette patent does not render claim 1 or claim depending from claim 1 *prima facie* obvious.

With respect to claim 78, the Shacklette patent does not teach or suggest inorganic particles comprising metal nitride or metalloid nitride. The Examiner has not discussed this feature of claim 78 in the Office Action. Therefore, Applicants believe that the Shacklette patent clearly does not render claim 78 *prima facie* obvious.

Since the Shacklette patent does not render any of Applicants' claims *prima facie* obvious, Applicants respectfully request withdrawal of the rejection of claims 1-3, 5-8, 10-22, 78, 80-86, 89-91, 104-106 and 108-109 under 35 U.S.C. § 103(a) as being unpatentable over the Shacklette patent.

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CONCLUSIONS

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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